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EXAMINER

WILHELM, TIMOTHY

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/538,816
Filing Date: January 17, 2006
Appellant(s): BRERETON ET AL.

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/04/2010 appealing from the Office action mailed 05/03/2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 3, 8-13, 40, and 42-53 are pending in this application. Claims 3,8-13, 40 and 42-53 stand finally rejected under 103(a). The rejection of claims 3,8-13,40, and 42-53 is being appealed.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being

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maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

A. Claims 8, 12, 13, and 42-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al (US 6,491,314) in view of Pierce (US 5,203,585).

B. Claims 3, 10, 11, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al (US 6,491,314) in view of Pierce (US 5,203,585).

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner.

Claims 9, 49, and 50 rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al (US 6,491,314) in view of Chalin et al (US 7,007,960).

Claims 51-53 rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al in view of Pierce and Chalin et al, and further in view of Pierce et al (US 2001/00202775).

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

5,203,585	Pierce	4-1993
6,491,314	Smith et al.	12-2002
7,007,960	Chalin et al.	3-2006

2001/0020775

Pierce et al.

9-2001

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 8,12,13, and 42-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al (6,491,314) in view of Pierce (5,203,585). Smith discloses a suspension trailing arm 518 for a vehicle comprising an integral axle locating formation 542 that fully encircles an axle 524 of a vehicle, a chassis mounting formation 552, and an integral damper mounting formation 528 for a shock absorber 522, wherein the trailing arm 518 is formed of a first section and a second section, said first section including a first portion 544 of the axle locating formation 542 and the chassis mounting formation 552 and said second section includes a second portion 548 of the axle locating formation 542 and a convex portion, which constitutes part of the outer plate of the axle locating formation, for supporting a bracket 519 for mounting a spring 520, and wherein the first and second portions 544,548 of the axle locating formation 542 are welded to each other at weld spots 590 directly above and below the axle 524. Smith discloses the present invention except for the trailing arm being cast or forged and the portion of the trailing arm between the axle locating formation and chassis connection portion being I-Shaped, though Smith does disclose casting or forging certain portions of the trailing arms of the many embodiments of Smith. Pierce teaches a trailing arm for a vehicle suspension system comprising an axle locating formation 64, a chassis mounting formation 38, and a substantial C-Shaped portion of the trailing arm 46 that extends between the axle locating formation and the chassis

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mounting formation, wherein said trailing arm may be formed as a forged steel beam or alternatively may be cast from a suitable cast steel (column 3, lines 20-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the trailing arm of Smith with the teaching of Pierce such that the trailing arm is either cast or forged with the portion extending between the chassis mounting formation and the axle locating formation being substantially C-Shaped to better ensure a high strength of the trailing arm (column 1, lines 45-53). With regard to the arm portion being an integral casting or forging with the axle locating formation, it would have been obvious to one having ordinary skill in the art at the time the invention was made to forge or cast, as taught by Pierce, the arm portion and axle locating formation of Smith as one integral piece, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. It has further been held that the term "integral" is sufficiently broad to embrace constructions united by such means as fastening and welding.

2. Claims 3,10,11, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith and Pierce as applied to claims 8,12,13, and 42-48 above. Smith and Pierce disclose the claimed invention except for a thickness of the suspension trailing arm being a certain specified thickness or the bending strength of the trailing arm being greater in certain areas. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form a thickness of the suspension trailing arm to be a certain thickness or make the bending strength of the trailing arm greater in certain areas, since it has been held that where the general

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conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

(10) Response to Argument

A. Obviousness of Claims 8, 12, 13, and 42-48 based on Smith et al. in view of Pierce.

Figs. 42 and, particularly, 48 of Smith et al. disclose the structural components as set out by independent claim 43, as discussed above in the rejection: a trailing arm including a chassis mounting formation, an axle mounting formation that includes a spring bracket and two portions that mate together to fully encircle an axle, and an arm portion that extends between the chassis mounting formation and the axle mounting formation. As Appellant has pointed out, Smith et al. is quiet as to the trailing arm being formed by casting or forging. In the rejection, Pierce was referenced to show that it would have been obvious to one of ordinary skill in the art to form a trailing arm through casting or forging. Appellant has argued that this is an improper combination. Examiner maintains that it is well known in the art to form components of a vehicle's suspension from many means of forming, such as casting and forging. Pierce proves this assertion. It is further noted that while the drawings of Smith et al. show a box beam, column 19, lines 58-59 of Smith et al. state that "an I beam can be used in lieu of a box beam." This is relevant because Appellant is arguing that the two arms of the two references are different kinds of trailing arms, with the arm of Smith et al. being a box beam and the arm of Pierce being a cast I beam, and that it is improper to combine the teaching of Pierce's means of forming with Smith et al.'s trailing arm as such. As Smith

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et al. teaches that its trailing arm can be an I beam, it would be obvious then to form said I beam through casting or forging as taught by Pierce. Attention is also drawn to the fact that Smith et al. further teaches forming some of its trailing arm parts, such as triangular gusset parts 580, through casting. Again, as casting is well known in the art as a means of forming suspension components, it would therefore have been obvious to have taken Smith et al.'s own teaching of casting components and applied the broader teaching of Pierce to cast the entire trailing arm.

With regard to claim 13, the outer portion 548 of the axle locating formation has been cited as including a convex portion for attaching an additional suspension component, such as a spring bracket or the like.

B. Obviousness of Claims 3, 10, 11, and 40 based on Smith et al. in view of Pierce.

Appellant argues that it would not be obvious to alter the thickness and bending strength of the suspension trailing arm taught by Smith et al and Pierce as a matter of finding an optimum or workable range. However, such an alteration has been determined to involve routine skill in the art as it is known to adapt qualities of a suspension component such as strength and size to a desired value as required by different specific designs. For example, in use with a larger, heavier vehicle, the thickness of the vehicle's suspension trailing arm must be altered to accommodate the weight and size of the vehicle. The opposite must be applied to a smaller vehicle. The same may be said about the bending strength of the trailing arm. Therefore, finding the

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optimum or workable range of both strength and sickness is routine skill in the art and is obvious in order to accommodate the other physical characteristics of a vehicle.

The rejections of claims 9, 49, and 50 based on Smith et al in view of Chalin et al and of claims 51-53 based on Smith et al in view of Pierce and Chalin et al, and further in view of Pierce et al. are being withdrawn.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Timothy D Wilhelm/
Examiner, Art Unit 3616

/Paul N. Dickson/
Supervisory Patent Examiner, Art Unit 3616

Conferees:

Timothy Wilhelm /tw/

Paul N. Dickson /pnd/

Marc Jimenez /mj/